

Combo Circuit Lab

Name: _____

Learning Goals: Students will be able to:

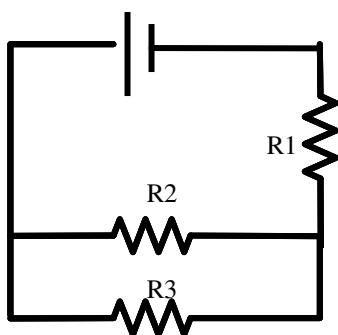
- Build combination circuits from schematic drawings,
- Provide reasoning to explain the measurements in circuits.

Procedure: Open *Circuit Construction Kit* from the PHeT web site.

1. Put three resistors on the work area. Right click on each to make the resistances different from one another. Make a data table like the one given and record the individual resistances.

2. Build the circuit given in Figure A. Make a table like the one below and complete it by measuring the voltage across each resistor and the power supply and measuring the current through each resistor and the total current coming out the power supply.

Figure A



Resistor	Individual resistance (ohms)	Current (amps)	Voltage (Volts)	Resistance in the circuit (ohms) $R=V/I$
1				
2				
3				
total	(Theoretical)			

3. Provide evidence that your table information is reasonable. Write down your reasoning and show your calculations. Before you take apart your experiment, show your results to your instructor to see if they are acceptable. Credit is given only if the results are correct and your reasoning is sound.

4. Repeat the procedure with the circuit in Figure B.

Figure B

